Resources for Information on New and Emerging Technologies

Steven Parker, PE, CEM

Chief Engineer

Building Energy Systems & Technologies

Energy and Environment Directorate

Pacific Northwest National Laboratory



Objective

- Provide list of programs that research and provide useful, technical, information on new and emerging energyefficient technologies
 - State supported energy-efficiency programs
 - Utility supported energy-efficiency and research programs
 - Other organizations
 - Feds too (if you know where to look)
- Caveat emptor
- Call to action



First Note

- A lot of people do a lot of good work and have a lot of good information but do not publicize well
 - Talk to utility representatives
 - Talk to state energy office
 - Talk to state university energy programs
 - I prefer public reports, but other sources can be beneficial
- Everybody has a bias
 - Bias is not necessarily bad, but it can skew conclusions
- Seek different opinions
 - One pilot/demonstration does not answer all questions



State-supported Programs

- California
 - California Energy Commission (CEC) (www.energy.ca.gov)
 - CEC Research, Development and Demonstration (www.energy.ca.gov/research)
 - UC Davis Energy Institute (energy.ucdavis.edu)
 - California Lighting Technology Center (cltc.ucdavis.edu)
 - Western Cooling Efficiency Center (wcec.ucdavis.edu)
 - Energy Efficiency Center (eec.ucdavis.edu)



More States

- Florida
 - Florida Solar Energy Center (FSEC) (www.fsec.ucf.edu)
- lowa
 - Iowa Energy Center (www.energy.iastate.edu)
- New York
 - New York State Energy Research and Development Authority (www.nyserda.org)
 - Rensselaer Polytechnic Institute, Lighting Research Center (www.lrc.rpi.edu)

More States

- Washington
 - Washington State University, Energy Programs (www.energy.wsu.edu)
- Wisconsin
 - Energy Center of Wisconsin (www.ecw.org)
- Several other states sponsor good research but the reports are not publicized as well

Utility Energy Centers & Research Programs

- [California] Emerging Technologies Coordinating Council (www.etcc-ca.com)
- [California] Energy Design Resources (www.energydesignresources.com)
- [California] Food Service Technology Center (www.fishnick.com)
- [California] Sacramento Municipal Utility District (SMUD)
 - Customer Advanced Technologies Program (www.smud.org/en/education-safety/cat/Pages/index.aspx)

More Utilities

- [California] Southern California Edison, Energy Centers (www.sce.com/b-sb/energy-centers/energy-centers.htm)
- [Washington] Lighting Design Lab (www.lightingdesignlab.com)
- All utilities study new technologies internally, but reports may not be publicly available
 - Talk to your account representative
 - Consider the utility's potential bias



Professional and Trade Associations

- There are many
- They are professional
- They have good intentions
- They can be biased

Other Organizations and Associations

- Alliance to Save Energy (ASE) (www.ase.org)
- American Council for an Energy Efficient Economy (ACEEE) (www.aceee.org)
- Consortium for Energy Efficiency (CEE) (www.cee1.org)
- Northwest Energy Efficiency Alliance (www.neea.org)
- New Buildings Institute (www.newbuildings.org)



Other Resources

- Portland Energy Conservation, Inc. (PECI) (www.peci.org)
- E Source (www.esource.com)
 - Must be a paid member to access most publications
- EPRI
 - Must be a utility and paid member



Federal Agency Sources

- Department of Energy
 - Energy Efficiency and Renewable Energy (EERE) (www.eere.energy.gov)
 - 10 program offices
 - Fossil Energy (FE) (www.fossil.energy.gov)
 - Electricity Delivery and Energy Reliability (OE) (www.oe.energy.gov)
 - DOE national laboratories and technology centers (14+7)
 - Power Administrations
 - Bonneville Power Administration (www.bpa.gov/energy/n/)
 - Western Area Power Administration (www.wapa.gov/es/)



More Feds

- General Services Administration
 - Green Proving Ground
 - Office of Federal High-performance Buildings (www.gsa.gov/portal/content/229633)
 - Public Buildings Service, Applied Research Program (www.gsa.gov/portal/category/25479)
- Department of Defense
 - Navy Techval Program (paul.kistler@navy.mil)
 - ERDC-CERL Fuel Cell (dodfuelcell.cecer.army.mil)



More Feds

- Environmental Protection Agency
 - Climate Protection Partnership Division (www.epa.gov/cpd)
 - Energy Star (www.energystar.gov)
 - Climate Leaders (www.epa.gov/climateleaders)
 - Combined Heat and Power (www.epa.gov/chp)
- Department of Commerce
 - National Technical Information Service (NTIS) (www.ntis.gov/search)
 - National Institute of Standards and Technology (NIST) (www.nist.gov/publication-portal.cfm)



Caveat Emptor

- The Internet is a tool and not a source
- Not everything is screened, thorough, peer reviewed, unbiased, or even trustworthy
 - Consider the source
- New technologies have risk
 - But we need risk takers
- Things change
 - Watch the publication date



Call to Action

- I hope that more organizations will take proactive steps to make more (reliable) information publicly available
 - Document your pilots/demonstrations
 - Share the results
- If you need it (want it), ask for it!

Interagency Technology Deployment Working Group

- A forum where Federal agencies can
 - Exchange information on new and underutilized technologies
 - Collaboratively develop policies, strategies and tools to accelerate the deployment of emerging technologies
 - Develop core criteria for technology assessment
 - Share lessons learned about new technologies
- First meeting
 - May 19, 2011, 10:00 a.m. to 12:00 p.m.
 - DOE National Laboratory support office
 - 901 D Street SW, Suite 930, Washington, DC
 - Pre-register via e-mail to Melissa Totten of SRA at melissa totten@sra.com by April 29



Thank you

Steven Parker, PE, CEM
Chief Engineer
Energy and Environment Directorate
Pacific Northwest National Laboratory
Richland, WA
Steven.Parker@pnl.gov

